SUPPORT FOR THE AMENDMENTS

Support for the amendment of Claim 2 is found on page 11, lines 22-24, in the specification.

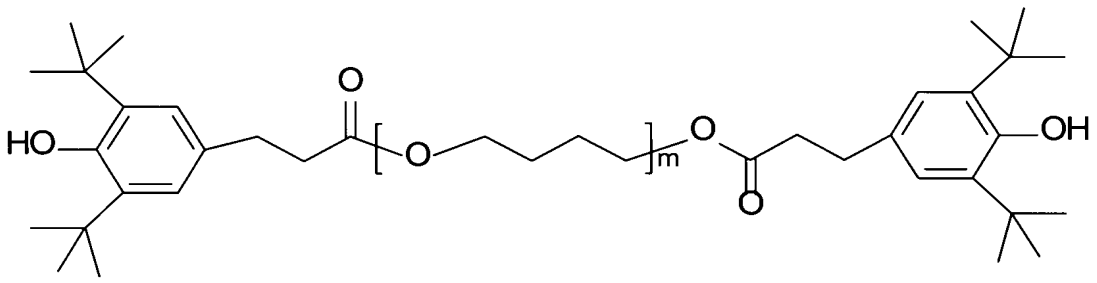
No new matter is added to this application by this amendment.

Claims 1-20 are active. Claims 1, 3-10 and 14 are allowed.

REMARKS/ARGUMENTS

The claimed invention is directed to a mixture which provides thermal and oxidative stability to plastics by preventing deterioration of mechanical properties and discoloration due to heat and oxidative degradation.

The claimed invention addresses this problem by providing a mixture comprising an **amorphous** phenolic stabilizer and at least one reducing agent, as described in Claims 1 and 2. According to Claim 2 the amorphous phenolic stabilizer is represented by the structure:



wherein the selection of m is such that, in the stabilizer mixture comprising the individual stabilizer molecules, the weight-average molecular weight of the stabilizer mixture is greater than the number-average molecular weight of the stabilizer mixture.

In this structure the weight-average molecular weight of the stabilizer mixture is greater than the number-average molecular weight of the stabilizer mixture. Applicants have described that such stabilizer mixtures as prepared according to the claimed invention have very low color as indicated by the Hazen number of less than 100. Such low color value is achieved by the process of the claimed invention wherein a reducing agent is added to the reaction mixture for the preparation of the amorphous phenolic stabilizer at the beginning of the preparation reaction. Applicants have described (page 7, lines 8-21) that without reducing agent present during the synthesis of the amorphous phenolic compound, color contamination forms during the synthesis reaction. However, according to the claimed invention, the color value of the stabilizer mixture is significantly reduced by adding reducing agent to the reaction before completing the synthesis of the amorphous phenolic stabilizer. Applicants have described the particular significance of this invention as follows:

> "The advantage of the lower level of intrinsic color in the mixtures of the invention is particularly relevant in the case of amorphous stabilizers for which conventional purification steps, e.g. crystallization, cannot be used for removing chromophores, because these stabilizers of the invention do not crystallize. Nor can the phenolic stabilizers generally be subjected to other purification processes which are usual in other circumstances, e.g. distillation, since the molar masses are very high and therefore the vapor pressures of these compounds are very low, and the tendency to form the chromophores is increased specifically at the high temperatures needed." (Page 2, line 41 bridging to page 3)

Applicants wish to thank Examiner Goloboy for the courteous and useful telephonic discussion of this application with Applicants' U.S. representative on May 14, 2009. At that time Applicants U.S. representative inquired why Claims 1, 3-10 and 14 were allowed, but Claims 2, 11-13 and 15-20 were not allowed. Examiner Goloboy pointed out that the language of Claim 1 was different than that of Claim 2 and this was the reason for the allowance of Claim 1 but not Claim 2. Specifically Claim 1 recites that the selection of "n" in the chemical formula is is such that, in the stabilizer mixture comprising the individual stabilizer molecules, the weight-average molecular weight of the stabilizer mixture is greater than the number-average molecular weight of the stabilizer mixture. Claim 2 did not describe the same limitation and therfore the rejection over Dexter in view of Fritz was maintained. Examiner Goloboy indicated that if Claim 2 were amended to include the same description as Claim 1, Claim 2 would also be allowable. Claim 2 is amended as described herein.

The rejection of Claims 2, 11-13 and 15-20 under 35 U.S.C. 103(a) over Dexter et al. (U.S. 3,285,855) in view of Fritz et al. (U.S.3,305,520) is respectfully traversed.

Dexter describes a series of substituted hundered phenols as stabilizers (Claim 1). The Office has cited formula IId, alleging that the cited formula has a structure similar to the structure of Claim 2.

Applicants respectfully submit that in the diol central portion of the above structure is based on **a specific and defined ether diol** which may vary in length of the alkyl chain according to a specific structure. For example, if y' and z' are both 2, the diol portion would be diethylene glycol. This is a specific molecule, having a defined structure and not a polymeric material having a range of molecular weights as according to the claimed invention. In such a specific molecule as described in the cited reference the number average molecular weight and weight average molecular weight are the same number. Nowhere does Dexter disclose or suggest a polyglycol mixture based structure.

In contrast, in the structure according to Claim 2, the central unit is a **mixture of polymeric structures, i.e., a polybutylene glycol mixture** as described by the relationship that the weight-average molecular weight is greater than the number-average molecular weight.

The Office has cited Fritz to show the addition of a phosphite to a transesterification reaction.

Fritz describes a polycarbonate plastic prepared from a diphenol which is stabilized against discoloration by a phosphite (Claim 1). Nowhere does this reference disclose or suggest the amorphous structures according to Claims 1 and 2 of the present invention.

Therefore, Applicants respectfully submit that Fritz does not cure the deficiency of Dexter as described above and the cited combination of references neither anticipates nor renders the claimed invention obvious. Accordingly, withdrawal of the rejection of Claims 2, 11-13 and 15-20 under 35 U.S.C. 103(a) over Dexter in view of Fritz is respectfully requested.

Applicants respectfully submit that the above-identified application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

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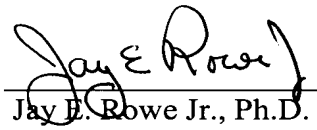

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